

201- 15895



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05/17/2005 06:18 PM

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Subject Environmental Defense comments on the
Dinonylnaphthalene Category

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05 MAY 18 PM 1:33

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Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for the **Dinonylnaphthalene Category**.

The test plan and robust summaries for the proposed dinonylnaphthalene (DNN) were submitted by King Industries. The proposed category is comprised of four chemicals; diisononylnaphthalene (DINN) (CAS #63512-64-1), dinonylnaphthalene sulfonic acid (DNNS) (CAS #25322-17-2), dinonylnaphthalene sulfonic acid calcium salt (DNNSC) (CAS #57855-77-3) and dinonylnaphthalene sulfonic acid barium salt (DNNSB)(CAS # 25619-56-1).

According to the test plan, DINN is a closed-system intermediate used as a starting material for the other members of the category. DNNS, DNNSC and DNNSB are used as additives in industrial lubricants, greases, metalworking fluids, industrial coatings and rust preventives. These additives are said to be present at 0.5-3 percent in the formulated products in which they are used. The test plan states that the most likely source of environmental exposure is accidental spills, but no information is provided on the magnitude of environmental releases from its stated uses. Indeed, its presence in various lubricants and greases seems to provide opportunity for environmental releases and exposures.

The justification for the proposed category is weak and not convincing. While all proposed members contain the dinonylnaphthalene structure, three of the members also contain a sulfonic acid moiety, which could significantly alter biological and toxicological properties. No information is provided on metabolism and pharmacokinetics to evaluate the impact of the sulfonic acid moiety on absorption, excretion, metabolic rates, metabolic profiles and tissue distribution. Without such data, acceptable criteria for category formation have not been met. We recommend that the sponsor not place DINN in the proposed category, although we agree that it seems reasonable to establish a category for DNNS, DNNSC and DNNSB. Therefore, we recommend that the following tests be conducted to fulfill SIDS data needs:

1. With the exception of acute toxicity data in rodents, no ecotoxicity and mammalian toxicity data are available for DINN. Therefore, we recommend that the sponsor conduct studies for all three ecotoxicity endpoints, for the combined repeat dose/reproductive/developmental endpoints, and for in vivo and in vitro genetic toxicity. We agree with the sponsor's proposal to use the oral route of exposure for the mammalian toxicity studies. We also recommend that the sponsor conduct a biodegradation study on DINN.
2. The same data gaps exist for DNNS, DNNSC and DNNSB. Since these three chemicals can be grouped together, we recommend that additional studies be conducted on at least one of the members. These studies should be the same as recommended for DINN indicated in point 1 above. The sponsor proposed to use DNNSB as test substance for additional tests and we agree with that selection.

Thank you for this opportunity to comment.

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